

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

FIRST QUALITY TISSUE, LLC,

Plaintiff,

v.

IRVING CONSUMER PRODUCTS LIMITED
and IRVING CONSUMER PRODUCTS, INC.,

Defendants.

Civil Action No. 19-428-RGA

MEMORANDUM OPINION

Joseph B. Warden, Warren Keith Mabey, Jr., Nitika Gupta Fiorella, FISH & RICHARDSON
P.C., Wilmington, DE.

Attorneys for Plaintiff.

John G. Day, Andrew C. Mayo, ASHBY & GEDDES, Wilmington, DE; Maximilian A. Grant,
Matthew J. Moore, Inge A. Osman, Rebecca L. Rabenstein, Jeremiah A. Egger, LATHAM &
WATKINS LLP, Washington, D.C.; Charles A. Sanders, David W. Rowe, Paul Weinand,
LATHAM & WATKINS LLP, Boston, MA.

Attorneys for Defendants.

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ANDREWS, UNITED STATES DISTRICT JUDGE:

Before me are Plaintiff's motion to exclude expert testimony (D.I. 194) and Defendants' motion for summary judgment and to exclude expert testimony (D.I. 196). The motions have been fully briefed (D.I. 195, 197, 206, 210, 220, 222) and I heard oral argument on select issues on January 19, 2022 (D.I. 281). Following oral argument, I issued a Supplemental Order on Claim Construction (D.I. 275), and the parties submitted letters of additional legal authority (D.I. 276, 277) and additional briefing on the issues (D.I. 282, 286, 288). I have considered the parties' arguments and briefing.

I. BACKGROUND

Plaintiff First Quality ("FQ") brings this action alleging that Irving's accused bath tissue product infringes ten claims of three of FQ's patents: claims 1 and 3 of U.S. Patent No. 9,506,203 ("the '203 patent"), claims 1, 3, 4, and 8 of U.S. Patent No. 9,580,872 ("the '872 patent"), and claims 4, 10, 12 and 13 of U.S. Patent No. 9,725,853 ("the '853 patent") (collectively, "the Asserted Patents" and "the Asserted Claims"). (D.I. 1 ¶ 22; D.I. 197 at 1). The Asserted Patents share essentially the same specification¹ and are directed toward novel "through air dried" tissues. (See D.I. 1-1, 1-2, 1-3).

Claim 1 of the '203 patent discloses, "A through air dried tissue comprising an outer surface having an Average Peak to Valley Waviness of 140 microns or less and a Waviness Uniformity of 27 microns or less, the tissue having a bulk softness of less than 10TS7." (D.I. 1-1 at 12).

Claim 3 of the '203 patent is a dependent claim of claim 1, disclosing, "A multi-ply sheet comprising two or more plies, at least one of the two or more plies comprising the tissue of claim 1." (*Id.*).

¹ Thus, I cite only to one of them, the '203 patent's (hereinafter, "the Specification").

Claim 1 of the '872 patent discloses, "A through air dried tissue comprising an outer surface having an Average Peak to Valley Waviness of 140 microns or less, a Waviness Uniformity of 27 microns or less, an Average Primary Amplitude of 50 microns or less and an Amplitude Uniformity of 8 microns or less." (D.I. 1-2 at 11-12).

Claim 3 of the '872 patent is a dependent claim of unasserted dependent claim 2, disclosing, "The tissue of claim 2, further comprising an interior layer." (*Id.* at 12). Claim 2 of the '872 patent is a dependent claim of claim 1, disclosing, "The tissue of claim 1, wherein the tissue includes first and second exterior layers." (*Id.*).

Claim 4 of the '872 patent is a dependent claim of claim 1, disclosing, "The tissue of claim 1, wherein the tissue has a bulk softness of less than 10TS7." (*Id.*).

Claim 8 of the '872 patent is a dependent claim of claim 1, disclosing, "A multi-ply sheet comprising two or more plies, at least one of the two or more plies comprising the tissue of claim 1." (*Id.*).

Claim 4 of the '853 patent discloses, "A through air dried tissue having a bulk softness of less than 10TS7 and comprising an outer surface having an Average Peak to Valley Waviness of 140 microns or less." (D.I. 1-3 at 12).

Claim 10 of the '853 patent is a dependent claim of unasserted independent claim 8, disclosing, "The two-ply, through air dried tissue of claim 8, wherein the outer surface has an Average Peak to Valley Waviness of 135 microns or less." (*Id.*). Claim 8 of the '853 patent discloses:

A two-ply, through air dried tissue comprising an outer surface having an Average Peak to Valley Waviness of 140 microns or less, a Waviness Uniformity of 27 microns or less, an Average Primary Amplitude of 50 microns or less and an Amplitude Uniformity of 8 microns or less.

(*Id.*).

Claim 12 of the '853 patent is a dependent claim of unasserted independent claim 8, disclosing, "The two-ply, through air dried tissue of claim 8, wherein the tissue has a softness of at least 90." (*Id.*).

Claim 13 of the '853 patent is a dependent claim of unasserted independent claim 8, disclosing, "the two-ply, through air dried tissue of claim 8, wherein the tissue has a caliper of less than 650 microns." (*Id.*).

Irving seeks summary judgment "that all asserted claims are invalid for indefiniteness, lack of written description, or both." (D.I. 197 at 1). Irving also moves to exclude testimony from FQ's technical expert, Dr. Runge, and damages expert, Dr. Maness. (*Id.* at 2).

FQ moves to exclude testimony from Irving's technical experts, Dr. Keller and Mr. Kavalew, and damages expert, Mr. Malackowski. (D.I. 195 at 1).

I issued claim constructions (D.I. 85, 275) for the following terms that are relevant to the issues before me now:

Term	Construction
"Average Peak to Valley Waviness"	Average peak height plus average valley depth (both taken as positive values) relative to the meanline, as computed and measured according to the procedure of the '203 Patent at 9:31-57 [and corresponding disclosure of the other Asserted Patents].
"Average Primary Amplitude"	Average distance between each roughness profile point and the meanline, as compared and measured according to the procedure of the '203 Patent at 9:31-57 [and corresponding disclosure of the other Asserted Patents].
"an outer surface"	the surface of the outer side of the through air dried tissue

II. LEGAL STANDARDS

A. Summary Judgment

“The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). Material facts are those “that could affect the outcome” of the proceeding. *Lamont v. New Jersey*, 637 F.3d 177, 181 (3d Cir. 2011) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). “[A] dispute about a material fact is ‘genuine’ if the evidence is sufficient to permit a reasonable jury to return a verdict for the nonmoving party.” *Id.* The burden on the moving party may be discharged by pointing out to the district court that there is an absence of evidence supporting the non-moving party’s case. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

The burden then shifts to the non-movant to demonstrate the existence of a genuine issue for trial. *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 586–87 (1986); *Williams v. Borough of West Chester, Pa.*, 891 F.2d 458, 460–61 (3d Cir. 1989). A non-moving party asserting that a fact is genuinely disputed must support such an assertion by: “(A) citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations . . . , admissions, interrogatory answers, or other materials; or (B) showing that the materials cited [by the opposing party] do not establish the absence . . . of a genuine dispute” Fed. R. Civ. P. 56(c)(1). The non-moving party’s evidence “must amount to more than a scintilla, but may amount to less (in the evaluation of the court) than a preponderance.” *Williams*, 891 F.2d at 461.

When determining whether a genuine issue of material fact exists, the court must view the evidence in the light most favorable to the non-moving party and draw all reasonable inferences in that party’s favor. *Wishkin v. Potter*, 476 F.3d 180, 184 (3d Cir. 2007). If the non-moving party

fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. *See Celotex Corp.*, 477 U.S. at 322.

B. Expert Testimony

Federal Rule of Evidence 702 sets out the requirements for expert witness testimony and states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.

The Third Circuit has explained:

Rule 702 embodies a trilogy of restrictions on expert testimony: qualification, reliability and fit. Qualification refers to the requirement that the witness possess specialized expertise. We have interpreted this requirement liberally, holding that “a broad range of knowledge, skills, and training qualify an expert.” Secondly, the testimony must be reliable; it “must be based on the ‘methods and procedures of science’ rather than on ‘subjective belief or unsupported speculation’; the expert must have ‘good grounds’ for his o[r] her belief. In sum, *Daubert* holds that an inquiry into the reliability of scientific evidence under Rule 702 requires a determination as to its scientific validity.” Finally, Rule 702 requires that the expert testimony must fit the issues in the case. In other words, the expert's testimony must be relevant for the purposes of the case and must assist the trier of fact. The Supreme Court explained in *Daubert* that “Rule 702's ‘helpfulness’ standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility.”

By means of a so-called “*Daubert* hearing,” the district court acts as a gatekeeper, preventing opinion testimony that does not meet the requirements of qualification, reliability and fit from reaching the jury. *See Daubert* (“Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset, pursuant to Rule 104(a) [of the Federal Rules of Evidence] whether the expert is proposing to testify to (1) scientific

knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.”).

Schneider ex rel. Estate of Schneider v. Fried, 320 F.3d 396, 404-05 (3d Cir. 2003) (cleaned up).²

III. DISCUSSION

A. Indefiniteness

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). Where “different approaches to measurement are involved” in the indefiniteness inquiry, “the patent and prosecution history must disclose a single known approach or establish that, where multiple known approaches exist, a person having ordinary skill in the art would know which approach to select.” *Dow Chem. Co. v. Nova Chems. Corp. (Can.)*, 803 F.3d 620, 630 (Fed. Cir. 2015).

Indefiniteness is a question of law that may depend on subsidiary factual findings based on intrinsic evidence, *i.e.*, “the patent claims and specifications, along with the patent’s prosecution history,” and extrinsic evidence, “for example, to understand the meaning of a term in the relevant art at the relevant time.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1339-40 (Fed. Cir. 2015). “Regardless of whether a subsidiary factual finding plays a small or large role in the ultimate conclusion about the meaning of the patent term, the ultimate question of construction will remain a legal question.” *Id.* at 1340 (cleaned up). “[D]efiniteness ... is amenable to resolution

² The Court wrote under an earlier version of Rule 702, but the subsequent amendments to it were not intended to make any substantive change.

by the jury where the issues are factual in nature.” *BJ Servs. Co. v. Halliburton Energy Servs., Inc.*, 338 F.3d 1368, 1372 (Fed. Cir. 2003).

Invalidity must be proven by clear and convincing evidence. *Oakley, Inc. v. Sunglass Hut Int’l*, 316 F.3d 1331, 1339 (Fed. Cir. 2003). Thus, “[t]he burden of proving invalidity on summary judgment is high.” *Schumer v. Lab. Comput. Sys.*, 308 F.3d 1304, 1316 (Fed. Cir. 2002).

Each of the Asserted Claims requires an Average Peak to Valley Waviness (“Wc”) of either “140 or less” or “135 or less.”³ I construed “Average Peak to Valley Waviness” to require measurement according to the procedures described in the Asserted Patents’ Specification (“the Protocol”). (D.I. 85; D.I. 1-1 at 9:31-57).

Irving argues the Asserted Claims are invalid for indefiniteness “because there are multiple ways to measure [the claimed surface characteristics], and the specification does not provide any guidance as to which way to use.” (D.I. 197 at 10). Specifically, Irving argues the patents do not describe (1) “where to perform the twenty scans required to measure Wc and Pa on embossed tissue,” (2) “how to account for embossing when measuring Wc and Pa,” (3) “how many samples to test, and (4) which software version to use for the required calculations,” and that all of these decisions “can materially impact whether an embossed tissue satisfies the claims.” (*Id.*). FQ argues Irving cannot carry its burden on indefiniteness because a POSA “would understand that the patents describe one way, not multiple ways, to determine the claimed roughness parameters.” (D.I. 210 at 4).

³ Some of the Asserted Claims also require values for other surface roughness characteristics, including Waviness Uniformity, Average Primary Amplitude (“Pa”), and Amplitude Uniformity. Because Wc is the only surface roughness characteristic referenced by all the Asserted Claims, the parties’ indefiniteness arguments and my analysis focus on Wc.

I find that Irving has not met its burden of showing there are no genuine issues of material fact with respect to indefiniteness. For Irving to prevail on its theory of indefiniteness at the summary judgment stage, it must show it is undisputed that “there [are] competing existing methodologies that reach[] different results, and the patent failed to describe which of the multiple methods to use.” *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 875 F.3d 1369, 1377 (Fed. Cir. 2017). Irving has not done that, because whether a POSA would find there are “competing existing methodologies” on how to conduct the Wc testing described in the Protocol is a disputed factual issue. Further, insofar as there may be multiple legitimate ways to approach some aspects of the Wc testing, whether these “competing methodologies” reach different results is also a disputed factual issue.

As an initial matter, Irving’s indefiniteness arguments relating to number of samples and software version, arguments (3) and (4), respectively, are unconvincing. Irving’s argument that the Specification is ambiguous as to how many samples to test has no merit. For the reasons I articulated in my Supplemental Order on Claim Construction, the Protocol clearly contemplates testing and averaging 200 total samples. (*See* D.I. 275 at 4-5). Irving’s argument that a POSA would not know which version of the OmniSurf software to use to conduct the testing also fails. Dr. Runge and Dr. Brown state that a POSA would know to use the version of the software that was current as of the filing date of the patent, which shows Irving’s claim that a POSA would not know which software version to use is factually disputed. (D.I. 199-1 Ex. 2 ¶ 462-64 (Runge) (information regarding the version of the software available at the time the patents were filed “is readily available, and a [POSA] would have sought out that information and used the same software version used by First Quality in the patents.”); D.I. 212-1 Ex. B ¶ 27 (Brown) (a POSA “would understand that they should use the same version of software as the inventors.”)).

Irving's remaining indefiniteness arguments relate to (1) the Protocol's lack of guidance as to where the tissue should be scanned and (2) how a POSA should "account for embossing" during testing. I find that, as to the first, it is factually disputed that a POSA would not know generally where the tissue should be scanned and, further, it is factually disputed that any variation in where a POSA chooses to scan, so long as a POSA performs the scanning in an unbiased manner, would materially alter the results of the testing. As to the second, I find that it is factually disputed that a POSA would not know "how to account for embossing" during testing and, further, it is factually disputed that, so long as a POSA performs the scanning in an unbiased manner, the presence or absence of embossing would materially alter the results of the testing.

1. Location of Scanning

Irving argues, "the patents and their prosecution histories do not disclose (1) where to perform [the scans described in the Protocol], (2) whether the sample is physically moved between scans to test different lines, and, (3) if the sample is moved between scans, how to position those scans relative to each other," and that "all of these choices can materially affect whether Wc, Pa, and their uniformities for a given tissue fall[] within the claims because the POSA can choose whether to perform scans over embossing, not over embossing, or some combination thereof." (D.I. 197 at 13).

While the Protocol does not expressly address these questions, I find that testimony from Dr. Runge and Dr. Brown shows there is a factual dispute as to whether a POSA would nevertheless know the answers based on what is disclosed in the Protocol and standard industry practices. *See Presidio*, 875 F.3d at 1376 ("Under our post-*Nautilus* cases, a claim is not indefinite if a person of skill in the art would know how to utilize a standard measurement method ... to make the necessary measurement. A patent need not explicitly include information that is already

well known in the art.”). I also find that the experts’ testimony regarding fundamental best practices for achieving non-biased results shows there is a factual dispute as to whether, due to embossing, a POSA’s decision about where to perform the scans would materially affect the results of the testing.

I find that a factfinder could conclude based on the testimony of Dr. Runge and Dr. Brown that a POSA would know (1) to test in a generally central area of the tissue, (2) to avoid scanning over the same line, and (3) to keep the positioning of the scans consistent from sample to sample. With these assumptions in place, a factfinder could then conclude that the spacing between scans would be immaterial to the outcome, because a POSA would know not to intentionally seek out or avoid embossed areas, as doing so would bias the results.

First, Irving’s claim that a POSA would not know where to perform the scans described in the Protocol is factually disputed. Dr. Runge explains in his report that a POSA would know to run the tests “in a generally common center region of the samples” because “when a bath tissue sheet ... is mounted on the Mahr test fixture approximately perf to perf, the center region of the sheet largely lines up with the test fixture’s target region” and a POSA “would not be motivated to deviate from this general central region.” (D.I. 199-2 ¶ 18 (Runge)). Dr. Runge supports his opinion by explaining, “A person of ordinary skill would [] understand a central region to be the most sensible region to test because edge effects are mitigated in this region.” (*Id.* at 20).

Dr. Runge’s testimony is further supported by Dr. Brown’s opinion, “I understand from Dr. Runge that testing of a center region of a sheet is standard in the tissue industry, which is also consistent with general metrology practices.” (D.I. 212-1 Ex. C ¶ 14 (Brown)). Dr. Brown explains, “Observations of a center region are less likely to include surface artifacts caused by outside

influences (e.g., effects near the edges of each sheet where the perforation or roll cutting may have altered the surface properties).” (*Id.*).

Second, Irving’s claim that a POSA would not know whether the sample should be moved between scans to avoid scanning over the same line is factually disputed. Dr. Runge explains that, because “the stylus tip of a contact profilometer will necessarily ... deform the tissue surface as it runs over the surface,” “it would be apparent to a skilled artisan that repeat testing over the same line should be avoided to achieve the aims of the testing described in the patents.” (D.I. 213-1 Ex. B ¶ 454 (Runge)). Dr. Brown agrees, “Given the clear goal of the testing and the lack of any instruction expressly stating to the contrary, the clear direction to the person of skill in the art would be that the twenty scans should all be performed in the CD [cross machine] direction over twenty different traces.” (D.I. 212-1 Ex. B ¶ 25 (Brown)).

2. Accounting for Embossing

Irving’s claim that a POSA would not know what to do to “account for” embossing is factually disputed. Dr. Runge and Dr. Brown’s testimony suggest a POSA would understand that, because scanning should be performed “in a generally consistent, center region of each tissue sheet tested,” the precise spacing between scans is immaterial to the results and nothing special should be done to “account for” embossing on tissues. (D.I. 212-1 Ex. C ¶ 23 (Brown)). As Dr. Runge explains, a POSA would “recognize by default that the testing region should not be changed from sheet to sheet, as that would require modifying the test setup from sheet to sheet, which would, for example, introduce potential error.” (D.I. 199-1 Ex. 3 ¶ 20 (Runge)). Because a POSA would know that the testing locations should remain consistent across samples, a POSA would understand that nothing should be done to “account for” embossing, because “by testing a generally consistent/common region throughout, the scans will cross embossment an appropriate proportion

of time over 10 sheets, as a matter of course.” (*Id.* at 19). Dr. Brown agrees, “Over 10 tissue samples, the amount of embossing that appears in such measurements regions will be appropriately representative of the proportion of the tissue surface that has embossing. This is an unbiased, appropriate approach to understanding surface topographies....” (D.I. 212-1 Ex. C ¶ 23 (Brown)).

The testimony of Dr. Runge and Dr. Brown shows that a factfinder could conclude that, so long as a POSA uses “a common, consistent region for scans across multiple samples,” which “avoids unintentional biasing of results,” and neither intentionally seeks out nor avoids embossing, the exact spacing between scans would not materially impact the outcome of the testing. (D.I. 212-1 Ex. C ¶ 14). As Dr. Brown explains, “The patents explain that two hundred 30 mm scans should be performed across ten representative samples.... This generates a tremendous amount of data. In my experience, and as would be understood by a [POSA], that sample size renders further guidance as to *exactly* where to perform the scans unnecessary.” (D.I. 212-1 Ex. B. ¶22).

Irving argues, “Dr. Keller’s unrebutted testing establishes that embossing can materially affect measurement of the claimed W_c and P_a values.” (D.I. 197). Dr. Keller’s “unrebutted” testing, however, merely showed that scanning exclusively over embossed regions of the tissue produces materially different results than scanning exclusively over non-embossed regions. (D.I. 197 at 12; D.I. 198 ¶¶ 45-46, 50 (Keller) (FQ’s tissue met the claim limitations “when the scans did not run over embossing, whereas when the scans ran over embossing the values of the parameters did not fall within the claimed [ranges].”)).

Dr. Runge and Dr. Brown agree that a POSA would not interpret the Protocol to allow for scanning exclusively over embossed regions or exclusively over non-embossed regions, as doing so would bias the results. Dr. Runge states that scanning in a consistent region of the tissue “without regard to embossment is the standard and most reasonable approach for a [POSA] to take

because it is an unbiased approach – it takes the emboss pattern as it comes and it does not attempt to artificially bias the testing towards or away from emboss patterns.” (D.I. 199-1 Ex. 3 ¶20). He further states that a POSA “would not, as Dr. Keller does, specifically seek to conduct each and every test on only embossments or only on non-embossed portions of the samples. Nor would the [POSA] otherwise seek to bias the results as Dr. Keller suggests through gerrymandered testing.” (*Id.* ¶ 445). Dr. Brown states, “Dr. Keller’s suggestion that a [POSA] would choose to perform all of the scans in a specific way so as to skew the representativeness of the data is antithetical to standard scientific [principles] and, depending on the context, general [principles] of scientific honesty and ethics.” (D.I. 212-1 Ex. B ¶ 23). Therefore, whether embossing materially affects a tissue’s Pa and Wc measurements when a POSA does nothing to “account for” such embossing is factually disputed.

Irving cites to deposition testimony by Mr. Miller, Dr. Sealey, and Ms. Massey expressing differing opinions on whether embossments should be avoided during testing. (*See* D.I. 197 at 16). Their testimony goes to the weight of FQ’s argument, but it does not alter my conclusion that the question of whether a POSA would know, based on the Protocol and standard measurement practices, not to do anything to specially “account for” embossing is factually disputed. Because I find that the experts’ opinions and supporting reasoning are sufficient evidence such that a reasonable factfinder could conclude that a POSA would know to test embossed tissue just as she would non-embossed tissue, Irving has not met its burden of proving indefiniteness at the summary judgment stage. *See Viva Healthcare Packaging USA Inc. v. CTL Packaging USA Inc.*, 197 F. Supp. 3d 837, 860 (W.D.N.C. 2016) (holding “Defendants have failed to prove indefiniteness by clear and convincing evidence” where there are outstanding factual questions “as to what one skilled in the art would have understood by looking at the patent.”).

3. Conclusion

For these reasons, Irving's motion for summary judgment that the Asserted Claims are invalid for indefiniteness is DENIED.

B. Written Description

The written description requirement of 35 U.S.C. § 112 requires that a patent contain a description of the invention that "clearly allow[s] persons of ordinary skill in the art to recognize that the inventor invented what is claimed." *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (cleaned up). "[T]he test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Id.* The written description inquiry is a question of fact. Thus, "determining whether a patent complies with the written description requirement will necessarily vary depending on the context. Specifically, the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology." *Id.* (cleaned up).

"Compliance with the written description requirement . . . is amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party." *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1307 (Fed. Cir. 2008). "A party must prove invalidity for lack of written description by clear and convincing evidence." *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 682 (Fed. Cir. 2015).

Irving argues the Asserted Claims are invalid for lack of written description because (1) the patents do not disclose any tissue having both the claimed Wc and Pa characteristics and the other claimed properties (D.I. 197 at 22-25), (2) the patents do not disclose tissues having Wc and Pa values throughout the claimed broad ranges of Wc and Pa (*id.* at 25-26), and (3) the patents fail

to disclose a tissue having Wc and Pa in the claimed ranges based on an average of 200 samples, as required by the claims (D.I. 282 at 1-3). FQ responds that Irving's written description arguments are predicated on an incorrect understanding of what the law requires. (D.I. 210 at 18). "The Federal Circuit has made clear that '[a] claim will not be invalidated on section 112 grounds simply because the embodiments of the specification do not contain examples explicitly covering the full scope of the claim language.'" (*Id.* (quoting *LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005))).

For the following reasons, I find Irving has not met its burden of showing there are no genuine factual disputes material to the sufficiency of the Asserted Claims' written description. I address each of Irving's arguments in turn.

1. Wc/Pa and Softness Properties

Irving argues six⁴ of the Asserted Claims are invalid for lack of written description, because they require a combination of Wc and one of three other softness-related properties, but "Example 5 is the only disclosed example of a tissue having Wc and Pa within the claimed ranges, and [] the patents do not disclose the bulk softness, hand-feel softness, or caliper of Example 5." (D.I. 197 at 22). Thus, Irving argues, these claims are invalid because the Specification would not "clearly allow [a POSA] to recognize that [the inventors] invented what is claimed,' i.e., tissue having the claimed combination of properties." (*Id.* at 22 (quoting *Ariad*, 598 F.3d at 1351)). FQ responds,

⁴ Irving states, "Six asserted claims require a combination of (a) Wc (and in many asserted claims Pa) and (b) one of three other tissue properties." (D.I. 197 at 22). Irving, however, only specifically identifies five claims ("claims 1 and 3 of the '203 patent, claim 4 of the '872 patent, and claims 12 and 13 of the '853 patent") that disclose softness properties in addition to Wc, and are therefore invalid. (*Id.*). I assume Irving intended to identify claim 4 of the '853 patent as well, which discloses, "A through air dried tissue having a bulk softness of less than 10TS7 and comprising an outer surface having an Average Peak to Valley Waviness of 140 microns or less." (D.I. 1-3 at 12).

“that all claimed properties of the Example 5 tissue are not specifically disclosed [is] neither here nor there, under *Ariad* and other established law,” because “the specification, *as a whole*, does disclose that the inventors possessed their invention.” (D.I. 210 at 20).

I agree with FQ that *Ariad* does not require disclosure of a specific example embodying all of the claim limitations. As *Ariad* itself expressly states, the Federal Circuit has “made clear that the written description requirement does not demand either examples or an actual reduction to practice” *Ariad*, 598 F.3d at 1352. To satisfy the written description requirement, all that is required is a showing that a POSA would understand, based on what is disclosed within the four corners of the specification, that the inventors were in possession of what they claimed.

I find that Dr. Runge’s testimony about what a POSA would understand from the Specification’s disclosures relating to the tissue’s softness properties and surface profile properties is sufficient to show there is a genuine dispute of material fact as to the adequacy of the Asserted Patents’ written description. (See D.I. 213-1 Ex. B ¶¶ 476-80). Dr. Runge explains that a POSA would understand that the inventors were in possession of the claimed tissue based on the Specification’s detailed explanation of how the inventors achieved each of the claimed properties. (*Id.*). Dr. Runge notes that the Specification describes “how to adjust various levers to adjust each of the claimed properties,” “describes in detail the impact of various softener/debonder applications to the disclosed examples [1-4],” explains that two plies of the tissue of Example 1 were combined to create Example 5, and discusses “the relationship between the softness properties discussed in examples 1-4 with the surface profile properties of example 5.” (*Id.* ¶¶ 478-79).

A factfinder could reasonably conclude, based on Dr. Runge's testimony, that a POSA would understand from the Specification that the inventor was in possession of a tissue with all of the claimed properties.

2. Ranges

Irving argues the Asserted Claims are invalid for lack of written description because the written description does not support the broad ranges for the Wc and Pa values. The specification provides "just a single data point within each of the claimed ranges ... toward the upper end of the claimed ranges," and, "There is no description of a tissue having Wc or Pa, e.g., in the middle of the claimed ranges, let alone toward their lower ends." (D.I. 197 at 25-26). FQ responds that Irving is wrong to "focus on Example 5 in isolation, and eschew the rest of the patents' disclosure." (D.I. 210 at 22). FQ points to Dr. Runge's testimony about "how the inventors were able adjust various aspects of the tissue making process to achieve a TAD tissue with characteristics throughout the claimed range(s) for each" to support its argument that "the *totality* of the specification teaches the full scope of the claims." (*Id.* at 23).

I agree with FQ that Dr. Runge's testimony shows there is a genuine dispute of material fact as to whether the Asserted Patents' written description is sufficient. As the Federal Circuit explained in *Scripps*:

Open-ended claims are not inherently improper; as for all claims their appropriateness depends on the particular facts of the invention, the disclosure, and the prior art. They may be supported if there is an inherent, albeit not precisely known, [lower] limit and the specification enables one of skill in the art to approach that limit.

Scripps Clinic & Research Found. v. Genentech, Inc., 927 F.2d 1565, 1572 (Fed. Cir. 1991), *overruled on other grounds by Abbott Lab'ys v. Sandoz, Inc.*, 566 F.3d 1282, 1293 (Fed. Cir. 2009) ("[P]rocess terms limit product-by-process claims. To the extent

that *Scripps Clinic* is inconsistent with this rule, this court hereby expressly overrules *Scripps Clinic*.”⁵

Here, Dr. Runge’s testimony shows both that the claimed Wc and Pa ranges have an inherent lower limit and that the Specification would enable a POSA to approach that limit. Dr. Runge explains, “No actual real world tissue surface has a Pa or Wc—or more colloquially,

⁵ While *Scripps* was decided prior to the Federal Circuit’s clarification in *Ariad* that written description and enablement are distinct requirements of § 112, Irving has not cited a single post-*Ariad* example of a court invalidating a claim for lack of written description based on the claims’ disclosure of an open-ended range.

Lipocine does not help Irving. (See D.I. 277). There, the claims were directed to methods of administering a drug “to obtain certain designated pharmacokinetic (‘PK’) results.” *Lipocine Inc. v. Clarus Therapeutics, Inc.*, 541 F. Supp.3d 435, 439 (D. Del. June 1, 2021). There, the Court found the two “Composition Examples” in the specification, disclosing formulations containing 15% and 18% API that satisfied the functional PK claims, were insufficient to show possession of formulations throughout the entire claimed API concentration range (14-35%) that would likewise satisfy the functional PK claims. *Id.* at 458-59 (“The Composition Examples that satisfy the limitations of the [functional PK claims] are ... not representative of the entire claimed genus.”). In *Lipocine*, mere disclosure of how to achieve API concentrations throughout the claimed range without representative examples and accompanying PK results would have been insufficient to satisfy the written description requirement because the claims also contained functional limitations. *Id.* at 458 (“[T]he species *that are shown to be operative* are not representative of the entire claimed genus.”) (emphasis added). Here, by contrast, all the limitations of the Asserted Claims are structural – they describe surface and softness properties of a tissue – as opposed to functional. Thus, disclosure of examples spanning the entire claimed range of each property is unnecessary where the inventors have disclosed how to achieve values throughout the claimed range of each property, as Dr. Runge testifies they have done here.

Eiselstein and *Wertheim*, the two other cases Irving cites in support of its “range” written description argument, are also inapt. (See D.I. 277). The Federal Circuit’s conclusion in *Eiselstein* that the Board did not clearly err in finding a grandparent application claiming 45-55% nickel “did not provide an adequate written description of the invention comprising 50-60% nickel” is irrelevant. *Eiselstein v. Frank*, 52 F.3d 1035, 1040 (Fed. Cir. 1995). Here, the question is different, whether an example near one end of a claimed range in combination with a description of how to achieve values throughout the claimed range can provide an adequate written description of that range. *Eiselstein*’s conclusion that an earlier claimed range does not show possession of a later-claimed and different range does not help Irving. *Wertheim*, where the Court found that an earlier claimed range of 25-60% solids content did not provide an adequate written description of a later claimed range of “at least 35%” solids content, is inapposite for the same reason. *Application of Wertheim*, 541 F.2d 257, 263-64 (C.C.P.A. 1976).

“smoothness”—of zero microns. All real world surfaces, including tissue, have a practical lower limit defining their smoothness which is certainly not zero microns.” (D.I. 213-1 Ex. B ¶ 473). Moreover, in Dr. Runge’s opinion, “contrary to Dr. Keller’s assertion, the specification does indeed explain how to adjust various aspects of the tissue making process to achieve a TAD tissue over differing surface profiles less than the claimed upper limit(s) for each.” (*Id.* ¶ 471). Thus, a factfinder could reasonably conclude from Dr. Runge’s testimony that a POSA would understand the inventors were in possession of tissue products with surface properties throughout the claimed ranges. *See Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1376-77 (Fed. Cir. 2007) (upholding jury’s verdict that patents were not invalid for lack of written description because “jury was free to credit” testimony that “a [POSA] would recognize” claimed open-ended range had an inherent upper limit and a POSA “would be fully enabled to practice the invention based on the specification’s disclosure” “in reaching its conclusion that the invention was adequately described . . .”).

3. Number of Samples

Finally, Irving argues that the Asserted Claims are invalid for lack of written description because the Specification’s “failure to disclose any tissue having Wc within the claimed range ‘obtained by averaging 200 scans from ten samples’ confirms that there was no ‘possession’ of any Wc based on 200 scans from 10 samples....” (D.I. 282 at 2). Irving’s argument, however, improperly relies on extrinsic evidence to show that the Wc values reported in the Specification were not derived from 200 samples. *See id.*; *Ariad*, 598 F.3d at 1351 (holding written description “requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art”). Lack of written description cannot be proven by the sort of extrinsic evidence Irving offers here. In any event, even if it were clear from the four corners of

the Specification that the Wc and Pa data disclosed in Example 5 was derived from fewer than 200 samples, such a disclosure would still be sufficient to satisfy *Ariad*'s baseline requirement of "a constructive reduction to practice that in a definite way identifies the claimed invention" *Id.* at 1352.

4. Conclusion

For the reasons stated above, Irving's motion for summary judgment that the Asserted Claims are invalid for lack of written description is DENIED.

C. Copying Opinions

Irving argues Dr. Runge's and Dr. Maness's opinions that Irving copied FQ's products should be excluded because (1) copying is a factual issue that is equally within the competence of jurors to decide, (2) copying opinions improperly address Irving's "intent, motive or state of mind," and (3) the copying opinions are not grounded in reliable scientific evidence "because FQ's experts perform no analysis to identify any specific way in which Irving allegedly copied something FQ had done." (D.I. 197 at 27-28). FQ responds that Dr. Runge's⁶ "copying opinions" "are not chiefly about copying," but rather "the main thrust of those opinions are 'on Irving's practices in developing its Sam's Club Member's Mark bath tissue.'" (D.I. 210 at 27 (quoting D.I. 213-1 Ex. A ¶ 76)).

First, I agree with Irving that copying is a factual issue that is within the competence of the jurors to decide. I disagree, however, with Irving's characterization of Dr. Runge's "copying" testimony as "not grounded in reliable scientific evidence." (D.I. 197 at 28). Indeed, it appears that

⁶ Because Dr. Maness's copying opinions rely on Dr. Runge's opinions, I will focus my analysis on Dr. Runge's opinions. (See D.I. 199-1 Ex. 13 ¶¶ 37, 43-44, 61 (Maness Op.); Ex. 14 ¶¶ 39-40 (Maness Reply)). It is hard to imagine that there would be any legitimate reason to have Dr. Maness, an economist, rely upon or repeat any admissible "copying" testimony.

some of the factual evidence on which a jury would rely in reaching such a conclusion would benefit from an expert's explanation. For example, Dr. Runge relies on his expertise in the field of tissue research and development to opine on the significance of "Irving's stated goal of matching First Quality's levels on temporary wet strength," as the level of temporary wet strength "is a very specific aspect of tissue production" that "will also have a significant impact on the properties of the final product." (D.I. 199-1 Ex. 1 ¶ 78). Dr. Runge also relies on his expertise to opine, "Irving [] had a significantly inferior product as compared to First Quality's product" in June 2014, and the difference in softness between Irving and FQ's respective tissue products at that time was "significant, and overcoming such a difference in softness would be a product development challenge." (*Id.* ¶ 79).

Second, the parties agree that expert opinions on intent, motive, or state of mind are impermissible. FQ maintains, "Dr. Runge does not intend to opine on [intent, motive, or state of mind] and First Quality agrees that no expert should be allowed to." (D.I. 210 at 30). The parties' disagreement centers on whether individual excerpts from Dr. Runge's report are instances of expert opinion on intent, motive, or state of mind, or simply repetitions of Irving's own "stated intent" from their internal documents. (*Id.* ("[M]any of Irving's documents state an intent.")). I agree with FQ that at least some of the excerpts it identifies contain improper opinions on intent, motive, or state of mind. Nevertheless, these disputes are best resolved through objections at trial. I therefore decline to parse through Dr. Runge's report and rule individually (and without any context) on which opinions refer to intent and which do not. FQ is on notice of Irving's objections (and that there is merit to some of them) and would be well advised to limit the scope of Dr. Runge's testimony accordingly.

For the above reasons, I agree with FQ that “Dr. Runge’s incidental and sporadic references to intent and ‘copying’ . . . may be remedied without resorting to Irving’s proposed wholesale exclusion of opinions.” (*Id.* at 31). Therefore, I will DENY Irving’s motion to exclude Dr. Runge’s “copying” opinions with the following qualification. Neither Dr. Runge nor Dr. Maness may testify at trial that Irving copied FQ. The parties are correct that this is a factual conclusion that is within the province of the jury to decide. Dr. Runge may, however, offer opinions on the limited set of underlying factual circumstances from which copying could be inferred and which require expert explanation, including possibly industry standards for tissue product development and the significance of various individual tissue properties to the development process. FQ should err on the side of caution in determining which portions of Dr. Runge’s “copying” testimony to offer on the basis that they “provide technical and industry context for Irving’s documents which would not be apparent to a lay jury.” (*Id.* at 28).

D. Dr. Maness’s Damages Opinion

Irving argues Dr. Maness’s damages opinion should be excluded, because he (1) does not exclude any non-infringing products from his royalty base; (2) improperly “applies a rule of thumb” in setting his proposed royalty rate to Irving’s lowest annual profit margin for sales of its accused tissue; (3) “effectively disgorges Irving’s profits,” despite not opining on lost profits; (4) does not apportion any value to unpatented features of the accused tissue; and (5) “bases his reasonable royalty in part on his legally erroneous opinion that Irving’s paper towel sales to Sam’s Club are convoyed sales.” (D.I. 197 at 31). I address each of Irving’s arguments, some of which are frivolous, in turn.

1. Non-infringing products

Irving argues Dr. Maness's damages opinion should be excluded because his reasonable royalty calculation does not account for a percentage of tissue product that would not literally infringe the Asserted Claims, despite evidence that some of Irving's accused tissue "has Wc and Pa falling outside all asserted claims." (D.I. 197 at 32-33). FQ responds that Dr. Maness's calculations are proper "because, at a hypothetical negotiation, the parties' intent and expectation would be for [all] sales to be infringing," and, "to the extent there are any *de minimis* out-of-spec products that are non-infringing, sales of those products were only possible because of Irving's infringement." (D.I. 210 at 31-32).

FQ contends that any tissue product that satisfies Sam's Club's technical specifications infringes the Asserted Claims. (*See id.* at 32-33). In other words, FQ argues that if any of Irving's accused product does not infringe, it is only because it is "off-spec." (*Id.*; D.I. 213-1 Ex. A (Runge Opening Report) ¶ 60 ("The only products I am aware of that satisfy Sam's Club's specifications . . . are products that practice the claims of the Asserted Patents."), Ex. C (Runge Reply Report) ¶ 43 ("[T]he several individual, historical samples of Irving's Sam's Club Member's Mark bath tissue that were tested to be low quality for TS7 and TSA handfeel softness were clearly off-spec.")).

Irving replies, "[T]here is no evidence of what fraction [of the accused tissue] indisputably does not infringe or that such product is 'out-of-spec.'" (D.I. 220 at 17). Although FQ's position that non-infringing tissue is also necessarily "off-spec" is factually disputed, I find that Dr. Runge has a sound basis for this opinion and Dr. Maness's reliance on such an assumption in his damages calculation does not run afoul of *Daubert*. (*See* D.I. 213-1 Ex. C ¶¶ 38-43 ("Irving's documents show that there have been a number of instances where Irving produced tissue below its specification's targets and acceptance limits for TSA softness.")).

I agree with FQ that the law does not require a showing that “damages in all circumstances be limited to specific instances of infringement proven with direct evidence.” (D.I. 210 at 33 (quoting *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1334 (Fed. Cir. 2009))). I find that at the hypothetical negotiation, the assumption of the parties would be that all the accused tissue would have the same properties. (See D.I. 213-1 Ex. C ¶ 40 (“[O]ff-spec samples should not be determinative of the representative properties of a product, and generally would not be used in such a way in industry.”)). Thus, if the parties assume any of the tissue infringed, which would be a given at the hypothetical negotiation, they would assume essentially all the tissue infringed. I find Dr. Maness’s opinion that even if some out-of-spec bath tissue did not literally infringe, “neither party would desire the cost and nuisance of auditing every production batch sold to Sam’s Club to determine if each roll was within the asserted claims” to be sound. (D.I. 199-1 Ex. 14 ¶ 61). Therefore, Dr. Maness did not err in failing to account for off-spec non-infringing tissue in his reasonable royalty calculation.

2. “Rule of Thumb”

Irving frivolously argues Dr. Maness impermissibly applied a “rule of thumb” by selecting a proposed royalty rate equivalent to Irving’s lowest annual profit margin on accused bathroom tissue sales. (D.I. 197 at 33). I disagree.

The Federal Circuit has rejected rules of thumb for “being insufficiently grounded in the specific facts of the case.” *Virnetx, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1331-32 (Fed. Cir. 2014). Here, I find that Dr. Maness appropriately tied his selected royalty rate to facts specific to the case at hand. Dr. Maness explains the selected royalty rate is “based on Irving’s actual profit margin from accused sales throughout the infringement period as well as the profits expected at the time of the 2016 hypothetical negotiation,” in addition to the “bargaining power of the two

parties given [] case-specific facts,” such as the lack of a non-infringing alternative, and “the reality that Irving’s cost of forgoing a license would be walking away from all the profit associated with the Sam’s Club opportunity” (*See, e.g., D.I. 199-1 Ex. 14 ¶¶ 27*). Therefore, Dr. Maness did not rely on an impermissible “rule of thumb” in arriving at his selected royalty rate.

3. “Disgorgement”

Irving argues Dr. Maness’s use of a royalty rate equivalent to Irving’s lowest annual profit margin is an improper attempt to “reimburse FQ for lost profits by disgorging Irving’s profits.” (D.I. 197 at 35). This argument is frivolous too.

FQ is correct when it says that Dr. Maness’s opinion does not identify and does not seek to recover FQ’s lost profits. (D.I. 210 at 36). Nor does Dr. Maness’s opinion seek to “disgorge” Irving of its profits. Dr. Maness merely, and appropriately, considers Irving’s profits from sales of the accused tissue, *i.e.*, “[t]he established profitability of the product made under the patent; its commercial success; and its current popularity,” as one factor in determining a reasonable royalty rate. *See Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970). Irving’s arguments relating to lost profits and disgorgement are baseless.

4. Apportionment

Amidst the dross, Irving has one golden nugget.

Irving argues, “By refusing to apportion any value to unpatented aspects of the accused bathroom tissue, Dr. Maness violated ‘[t]he essential requirement [] that the ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.’” (D.I. 197 at 36 (quoting *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014))). FQ responds, “because bathroom tissue is not a multi component product, apportionment, per se, is not actually required.” (D.I. 210 at 37). FQ further argues that because

“the *only* way Irving was able to sell Member’s Mark bath tissue was by matching First Quality’s patent-practicing products,” “the Patents at Issue are the drivers of demand for the only customer who bought the accused product [Sam’s Club],” and therefore it was appropriate for Dr. Maness to apportion 100% of the value of the accused products to the patented technology. (*Id.* at 37-38). I am not convinced by FQ’s argument.

FQ is incorrect that apportionment is not required because bathroom tissue is not a multi-component product. The law on apportionment is clear. “A patentee is only entitled to a reasonable royalty attributable to the infringing features. The patentee must in every case give evidence tending to separate or apportion the defendant’s profits and the patentee’s damages between the patented feature and the unpatented features.” *Power Integrations, Inc. v. Fairchild Semiconductor Int’l Inc.*, 904 F.3d 965, 977 (Fed. Cir. 2018).

FQ’s reliance on *AstraZeneca* is also inapt. There, the Court found the novel subcoating “was substantially responsible for the value of the product” because it made it commercially viable for the first time; here, there is no dispute that bathroom tissue has long been commercially viable without FQ’s patented technology. *AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1339-40 (Fed. Cir. 2015). Irving’s tissue product has both patented and unpatented features that contribute value to and drive demand for the product. Therefore, apportionment is required, and I agree with Irving that “100% apportionment is no apportionment at all.” (D.I. 220 at 19).

I implied at oral argument that I did not believe Dr. Maness properly apportioned in his report and intended to strike any of his analysis that flowed from that failure. (D.I. 281 at 139:3-140:8). For the reasons stated above, I formally do that now by GRANTING Irving’s motion to exclude the portions of Dr. Maness’s original report that rely on his incorrect “apportionment” method.

Dr. Maness has filed a supplemental expert report to address the apportionment issue. Irving has filed a brief (D.I. 295) objecting to the alternative method of apportionment Dr. Maness employs in his supplemental report. I will treat Irving's renewed objection as a new motion and address it separately.

5. "Convoyed Sales"

Irving argues, "The final legal error requiring exclusion of Dr. Maness's damages opinion is that he treats Irving's paper towel sales to Sam's Club as convoyed sales in arriving at his proposed royalty," despite the paper towel sales not being "convoyed sales as a matter of law because *paper towels* and the accused *bathroom tissue* undisputedly lack a functional relationship." (D.I. 197 at 38). FQ responds that Dr. Maness does not use the paper towel sales in either his royalty base or royalty rate calculations and instead "notes only that because the parties would recognize that securing Sam's Club bath tissue business could help Irving secure its paper towel business, Irving's maximum willingness to pay would have been even greater than its 12.6% profit margin at the time of the hypothetical negotiation . . . and, therefore, Dr. Maness's 7.5% rate is conservative." (D.I. 210 at 40).

I find that, because Dr. Maness does not seek any lost profits for the paper towel sales, his consideration of the paper towel sales as part of his overall damages opinion is appropriate. *Georgia-Pacific* factor 6 expressly allows for the consideration of "[t]he effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales." *Georgia-Pacific*, 318 F. Supp. at 1120.

6. Conclusion

For the reasons stated above, the portion of Irving's motion to exclude Dr. Maness's damages opinion that I did not address at oral argument is DENIED.

E. Dr. Keller's Opinions

FQ seeks to exclude portions of Dr. Keller's opinions. Specifically, FQ argues Dr. Keller's proposed testimony (1) "advocat[es] and us[es] an improper claim construction of 'an outer surface,'" (2) discusses "optical" and "non-contact" profilometry, "which is irrelevant to this case," and (3) includes "rubber-stamping attorney argument, predicated on materials he admitted to never reviewing." (D.I. 195 at 1). I review each of these arguments in turn.

1. "Outer Surface"

FQ contends, "Dr. Keller argues . . . that the 'outer surface having' the claimed roughness parameters must be somehow either 'representative' of the entire outer surface of the tissue or be more than a 'mere portion' of the entire outer surface." (*Id.* at 3). FQ argues that this amounts to "a new claim requirement" which is "improper because it is contrary both to the plain meaning of the claims and the Court's constructions of 'Average Primary Amplitude' and 'Average Peak to Valley Waviness.'" (*Id.*). For the reasons explained in my Supplemental Order on Claim Construction (D.I. 275), I disagree.

I construed "an outer surface" to mean "the surface of the outer side of the through air dried tissue," explaining, "when the inventors discuss improvements to the tissue's 'surface profile,' they are referring to the surface profile of the tissue as a whole." (*Id.* at 2-3). The portions of Dr. Keller's opinions to which FQ objects, where he opines that infringement testing should be conducted to generate measurements that "are representative of the outer surface" and "not a mere portion of that outer surface" are compatible with this construction of "an outer surface." (D.I. 195 at 5-6; *see, e.g.*, D.I. 200-1 ¶ 36 (Keller Rebuttal) ("[T]he 'outer surface' that is claimed is not a

mere portion of that outer surface”); *Id.* ¶ 40 (POSA would understand FQ’s testing “is not representative of the outer surface.”)).

For these reasons, FQ’s motion to exclude Dr. Keller’s opinions on the claimed “outer surface” is DENIED.

2. Optical Profilometry

FQ moves to exclude Dr. Keller’s discussion of “optical” or “non-contact” profilometry because it is “both entirely irrelevant to the case and highly likely to confuse the trier of fact.” (D.I. 195 at 12). FQ argues that, because the Asserted Claims require that Wc and Pa be measured using contact profilometry, Dr. Keller’s “confounding discussion of non-contact, optical profilometry methods and the respective benefits of optical profilometry over contact profilometry throughout his reports is an impermissible end run around the Court’s claim construction.” (*Id.*). Irving responds that Dr. Keller’s comparison of contact profilometry to non-contact profilometry is relevant to damages, specifically “‘the nature of the invention’ and its relative lack of ‘utility,’ which are ‘important considerations in the hypothetical negotiation.’” (D.I. 206 at 15 (quoting *Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd.*, 807 F.3d 1283, 1304 (Fed. Cir. 2015))). Irving further argues that FQ’s framing of Dr. Keller’s opinions as “an impermissible end run around the Court’s claim construction” is incorrect, because Dr. Keller relies solely on contact profilometry measurements to opine on non-infringement. (D.I. 206 at 15).

Because I agree with Irving that (1) Dr. Keller has not relied on non-contact profilometry to opine on whether the accused product meets the claim limitations (D.I. 200-1 (Keller Rebuttal) ¶¶ 44-48; D.I. 200-2 (Keller Reply) ¶¶ 104-06), (2) Dr. Keller’s discussion of the deficiencies of the contact profilometry technique required by the claims may be relevant to damages (D.I. 200-17 at 22, 48), and (3) Dr. Keller’s non-contact profilometry images may help the jury visualize

what embossing and the surface characteristics that are the subject of the claim limitations look like at the micron scale (D.I. 200-6 ¶¶ 79-83), I do not see a reason to exclude Dr. Keller's testimony relating to optical profilometry at this time. FQ's motion to exclude Dr. Keller's testimony relating to optical profilometry is DENIED without prejudice to objections at trial based on the rules of evidence.

3. Dr. Keller's Other Opinions

FQ argues that Dr. Keller's remaining opinions are "attorney argument, created and written by Irving's lawyers, and merely rubber-stamped by Dr. Keller sight-unseen" and should therefore be excluded because "they are not predicated on reliable scientific investigation" (D.I. 195 at 16-17). FQ points to (1) Dr. Keller's admission in his deposition that "he reviewed, at most, only isolated lines identified by Irving's attorneys and no other portion of" transcripts from certain fact witnesses' depositions that he cited in his report (*id.* at 18; D.I. 200-7 (Keller Opening) ¶¶ 76, 117, 118, 132, 135, 136, 165, 178); (2) paragraph 132 of Dr. Keller's opening report discussing various fact witnesses' testimony on how contact profilometry scans should be spaced relative to each other, portions of which appear verbatim in a motion filed by Irving in October 2020, before Dr. Keller had access to the cited materials (D.I. 195 at 18-19; D.I. 200-7 ¶ 132; D.I. 200-9 at 2); and (3) Dr. Keller's "extensive[]" reliance on Mr. Kavalew's contemporaneously filed report, despite admitting at his deposition that he had not seen Mr. Kavalew's report prior to submitting his own report (D.I. 195 at 20).

Irving responds, "FQ's rhetoric ignores that Dr. Keller's opinions are well-supported by technical evidence and that he had very substantial involvement in his reports." Irving points to Dr. Keller's response to Irving's questioning about whether there were portions of his report he did not write: "The technical component is entirely mine. My findings are mine. I wrote those.

And the legal team I'm working with typed out the table of contents, inserted the patent['s claims].” (D.I. 206 at 18; D.I. 200-8 at 166:3-167:4).

I agree with Irving that the deficiencies identified by FQ in Dr. Keller's reports are not serious enough to require blanket exclusion of Dr. Keller's opinions. *In re Asbestos Products Liability Litigation (no. VI)*, 714 F. Supp. 2d 535, 542 (E.D. Pa. May 24, 2010) (“When a Rule 26(a)(2)(B) challenge is raised, the proper focus of the court's inquiry is whether the expert witness offered substantial input into what was put into the report.”) (cleaned up). The examples FQ points to involve subjects that are ancillary to Dr. Keller's primary invalidity and non-infringement opinions. Irving has shown that Dr. Keller had “substantial involvement” in what was included in his reports and was responsible for the reports' technical analyses and conclusions, which comprise the core of his testimony. (*See, e.g.*, D.I. 206 at 19 (citing evidence from the record to show “Dr. Keller's opinions are well-supported by technical evidence, including technical literature, patents, tissue images, testing, and measurements that the parties produced.”)).

FQ's concerns with Dr. Keller's report can be fairly addressed through cross-examination. For these reasons, FQ's motion to exclude Dr. Keller's opinions is DENIED.

F. Mr. Kavalew's Opinions

As I implied at oral argument (D.I. 281 at 105:22-106:3), I do not think there are any *Daubert* issues with Mr. Kavalew's opinions.

Irving relies on physical samples of tissues manufactured before the priority date of the Asserted Claims as prior art in its invalidity case. Irving's technical expert, Mr. Kavalew, performed testing on these prior art tissue samples to show they met the requirements of the Asserted Claims. FQ argues this testing by Mr. Kavalew should be excluded for three reasons: (1) “Irving's present-day test results on the physical samples do not reliably reflect the properties of

the tissue at the time they were prior art,” (2) “Mr. Kavalew relies on testing and evaluation on the alleged prior art samples performed by Irving employee Ida Lamanna, but during fact discovery Irving asserted privilege over Ms. Lamanna’s evaluation of those very same samples,” and (3) “[M]any of the test results are inherently unreliable because Mr. Kavalew is unable to confirm the correctness or accuracy of them,” “many of the measurements were inconsistently reported in Mr. Kavalew’s report,” and, “While Irving served a ‘corrected’ report from its attorneys after the close of expert discovery, there is no basis for the ‘corrections.’” (D.I. 195 at 21). I am not persuaded by any of FQ’s arguments.

First, I find that the question of whether the prior art samples had the same properties at the time of testing as they had prior to the priority date is a factual question on which both parties should be allowed to opine. Mr. Kavalew testified that the packaging was unopened prior to testing, had no expiration or “use by” dates, and that he personally inspected the samples and found they showed no signs of degradation. (D.I. 207-1 Ex. 20 ¶¶ 145, 146, 187, 206, 225; D.I. 200-5 ¶¶ 32-33). Mr. Kavalew also tested two properties of the tissues, caliper and tensile, that would have been likely to change over time if degradation had occurred and found both were within the target range for all samples. (D.I. 200-5 ¶¶ 85-89, 104-09, 160-65, 178-83, 284-89, 294-99, 345-50, 354-50, 354-57).

Second, as to the argument that FQ suffered some prejudice from its inability to depose Ms. Lamanna prior to Irving waiving its work product privilege, I resolved that at oral argument. (D.I. 281 at 134:7-139:2).

Finally, the errors in Mr. Kavalew’s original report were typographical and have been corrected. FQ is in possession of all the data from the testing and is free to cross examine Mr. Kavalew about that data and any remaining inconsistencies in his results at trial.

For these reasons, FQ's motion to exclude Mr. Kavalew's testimony about the results of his testing on the prior art tissues is DENIED.

G. Mr. Malackowski's Opinions

1. P&G Settlement Agreement

The Federal Circuit has "recognized that licenses may be presented to the jury to help the jury decide an appropriate royalty award." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1227 (Fed. Cir. 2014). "[T]here must be a basis in fact to associate the royalty rates used in prior licenses to the particular hypothetical negotiation at issue." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1317 (Fed. Cir. 2011). Because licenses "are almost never perfectly analogous to the infringement action," reasonable royalty opinions "relying on licenses must account for [] distinguishing facts when invoking them to value the patented invention." *Ericsson*, 773 F.3d at 1227. "[C]omparisons of past patent licenses to the infringement must account for the technological and economic differences between them." *Wordtech Sys., Inc. v. Integrated Networks Sol'ns, Inc.*, 609 F.3d 1308, 1320 (Fed. Cir. 2010) (cleaned up).

While the Federal Circuit "has often excluded licenses that are technologically or economically non-comparable," it "has also held, however, that the issue of comparability is often one of sufficiency of the evidence, not admissibility." *Bio-Rad Lab's, Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1373-74 (Fed. Cir. 2020). Nevertheless, "a patentee [can] not rely on license agreements that [are] radically different from the hypothetical agreement under consideration to determine a reasonable royalty." *Uniloc*, 632 F.3d at 1316 (cleaned up).

FQ seeks to exclude Mr. Malackowski's opinions relying on a "Settlement and Patent License Agreement" entered into between Proctor & Gamble and Irving (the "P&G-Irving Agreement") in March 2012. FQ argues, "Neither Irving nor Mr. Malackowski have come close

to showing that the [P&G-Irving Agreement] is comparable to the hypothetical license because neither Irving nor Mr. Malackowski have identified even the most rudimentary facts necessary to evaluate comparability of the [P&G-Irving Agreement].” (D.I. 195 at 27-28). FQ argues the “unknowns regarding that agreement include at least the following”: (1) “What dispute the settlement resolved,” (2) “what Irving product(s) the settlement covered,” (3) “how many sales or how much revenue Irving made or expected to make from the licensed product,” (4) “whether Irving ever actually used or intended to use the licensed technology in any product,” (5) “whether the licensed technology is capable of being used in bathroom tissue products,” and (6) “any identification whatsoever of the circumstances that led to the settlement.” (*Id.* at 28). Irving responds, “Mr. Malackowski at least has shown ‘baseline comparability’ to support admissibility, and FQ’s challenge to ‘the degree of comparability is a factual issue best addressed through cross examination.’” (D.I. 206 at 32 (quoting *Bio-Rad*, 967 F.3d at 1373-74)).

The P&G-Irving Agreement resolved two disputes, one relating to Irving’s diaper products (the “Diaper Dispute”), and one relating to Irving’s tissue products (the “Tissue Dispute”). (D.I. 200-17 at 40). Mr. Malackowski notes, “the disputes between the parties were ‘amicably resolved’ without any lawsuit being filed in court.” (*Id.*). The Diaper Dispute arose from a disagreement over royalty obligations due under a previous patent license agreement from 2003 (the “2003 Diaper License”). (*Id.* at 40-41). The P&G-Irving Agreement included a “release,” under which the parties agreed that no further payments would be required under the 2003 Diaper License. (*Id.* at 41).

The P&G-Irving Agreement granted Irving “a fully paid up, irrevocable, royalty-free, and worldwide license for all past manufacture, use, offering for sale, sale, or importation of any products within the claims of the licensed tissue patents.” (*Id.* at 41). Mr. Malackowski opines,

“With respect to the licensed products, the P&G-Irving Agreement can cover both [bathroom tissue] and paper towels.” (*Id.* at 43). Neither Mr. Malackowski nor Irvine, however, has identified any specific Irving product covered by the Agreement. Accordingly, the amount of revenue Irving has made or expected to make from the licensed technology is unknown.

Mr. Malackowski performed an in-depth assessment of the comparability of the P&G-Irving Agreement to the hypothetical negotiation. He begins by comparing the timing, noting the Agreement occurred “approximately 4.5 years prior to the hypothetical negotiation in November 2016,” but that there were “no notable differences in the bath tissue market during this period as the market was stable, growing at a rate of less than 1% per year.” (*Id.* at 41). Mr. Malackowski then compares the relationships between the respective parties, noting “the competitive relationship between the licensor and licensees in [the] P&G-Irving Agreement is sufficiently similar to the relationship of the hypothetical negotiators,” because, although P&G and Irving would not compete “at the retailer level for private label [bathroom tissue] supplier status,” they would “still compete with each other at the consumer level.” (*Id.* at 41).

Mr. Malackowski then turns to comparing the licensed technologies, noting the P&G-Irving Agreement “included rights to nine patents and patent applications,” including four issued U.S. patents. (*Id.*). He summarizes the technology claimed in the four issued patents, and relies on discussions with Mr. Kavalew, one of Irving’s technical experts, to conclude, “the licensed P&G patents are similar to the asserted patents in that they both disclose certain parameters relating to tissues.” (*Id.* at 41-42). In comparing the licensed technologies, Mr. Malackowski notes, “the testing and parameters contained in the licensed P&G patents are measurements that are commonly assessed in the industry in contrast to the Patents-in-Suit which disclose uncommon testing protocols and parameters,” and the licensed P&G patents disclose properties such as “enhanced

softness without sacrificing strength, bulk, and/or absorbency” and “improved absorbency,” as opposed to the Asserted Patents which “cover a totally flat sheet of tissue with a zero Average Peak to Valley Waviness, Primary Amplitude, and uniformity values.” (*Id.* at 42). For these reasons, Mr. Malackowski concludes, “Given the above, Mr. Kavalew noted that the P&G licensed patents are relatively more valuable than the Patents-in-Suit,” and therefore, “All else being equal, this would indicate that the reasonable royalty from the hypothetical negotiations would be lower than the royalty rate agreed to in the P&G-Irving Agreement.” (*Id.* at 42-43).

Mr. Malackowski notes that because “Irving also received a release regarding certain P&G patents related to Irving’s diaper products,” “the reasonable royalty from the hypothetical negotiations would be lower than the royalty agreed to in the P&G-Irving Agreement.” (*Id.* at 43).

He concludes, “the licensed products under the P&G-Irving Agreement and the hypothetical negotiations are sufficiently comparable,” because “the P&G-Irving Agreement can cover both [bathroom tissue] and paper towels.” (*Id.*). Finally, Mr. Malackowski compares the terms of the P&G-Irving Agreement and the hypothetical license, finding they both would be “long-term license[s]” which “would indicate a similar royalty rate in this matter.” (*Id.*).

I find that Mr. Malackowski has made a sufficient showing of the technological comparability of the P&G-Irving Agreement to the hypothetical negotiation. I also find that Mr. Malackowski’s analysis of the parties’ competitive relationships and the relative value of the inventions disclosed in the licensed patents as compared to the Asserted Patents is sufficient to make a showing of the “baseline [economic] comparability” required by the Federal Circuit. *See Bio-Rad*, 967 F.3d at 1373-74.

The thoroughness of Mr. Malackowski’s comparability analysis far exceeds the “loose, vague allegations of technological comparability” that led to the exclusion of the damages expert’s

opinion in *M2M Sol'ns LLC v. Enfora, Inc.*, 167 F. Supp. 3d 665, 677-78 (D. Del. 2016). Additionally, unlike in *M2M*, *id.* at 678, where the damages expert “virtually ignore[d] the fact that [the] two licenses resulted from litigation settlements, providing a drastically different backdrop than the hypothetical negotiation involving two willing licensors,” here, Mr. Malackowski expressly notes that no lawsuits were filed in the disputes giving rise to the P&G-Irving Agreement. (D.I. 200-17 at 40).

The other two cases FQ relies on in its argument for exclusion, *Plexxikon* and *Sprint*, are similarly inapt. In *Plexxikon*, the defendant failed to show “that the technology [was] comparable” and the Court took issue with “the litigation-focused circumstances of the negotiations of the licenses.” *Plexxikon Inc. v. Novartis Pharms. Corp.*, 2021 WL 97544, at *7 (N.D. Ca. Jan. 12, 2021). Here, the P&G-Irving Agreement did not arise out of litigation and Mr. Malackowski has made a sufficient showing of technological comparability. In *Sprint*, the licenses were excluded “most importantly” because “three out of the four licenses resulted from litigation settlements with non-practicing entities, who most likely were in drastically different bargaining positions than Sprint would have been in at the time of the hypothetical negotiation.” *Sprint Commc'ns Co. v. Comcast IP Holdings, LLC*, 2015 WL 456154, at *2 (D. Del. Jan. 30, 2015). By contrast, the P&G-Irving Agreement did not involve a non-practicing entity, and Mr. Malackowski expressly noted the similarities and differences between the competitive relationships of the respective parties in that Agreement and the present hypothetical negotiation. Finally, unlike in *Sprint*, where the licenses were “not sufficiently comparable to the hypothetical licenses” and “to the extent the lack of comparability could be accounted for, [the expert did] not attempt[] to do so,” here, Mr. Malackowski has performed a sufficient comparability analysis.

While the lack of information about the specific products covered by the agreement and Irving's actual or expected revenues from those products is a deficiency in Irving's showing of economic comparability, I find that these omissions go to the weight of Mr. Malackowski's opinion and can be sufficiently addressed through cross-examination. Thus, I find they are not severe enough deficiencies to require exclusion, especially as "the degree of comparability of the license agreements is a factual issue best addressed by cross examination and not by exclusion." *Bio-Rad*, 967 F.3d at 1374.

For these reasons, FQ's motion to exclude Mr. Malackowski's discussion of the P&G-Irving Agreement is DENIED.

2. GP-Irving Embossing License

Mr. Malackowski also relies on a license agreement (the "GP Emboss License") entered into between Georgia-Pacific Consumer Products LP ("GP") and Irving, in which GP licensed Irving a non-exclusive, limited license to an embossing pattern used on Irving's accused product. (D.I. 200-17 at 43). FQ argues this portion of Mr. Malackowski's opinion should be excluded, as "[t]he GP Emboss License is not even a patent license. It is a license only to a particular pattern." (D.I. 195 at 34). I agree. A license to an embossing pattern has effectively no bearing on the value of the Asserted Patents, which claim physical properties of a tissue product.

Mr. Malackowski's argument that the "the value of the Patents-in-Suit . . . can be correlated to the value of utilizing certain embossing patterns," because "whether a tissue falls within the scope of the asserted claims may depend on the embossing pattern used" is unpersuasive. (D.I. 200-17 at 45). While whether a tissue falls within the scope of the Asserted Claims may depend on the percentage of the tissue surface that is covered by embossment (although even that is

disputed), the purely aesthetic formation of the embossment, which is the “technology” covered by the GP Emboss License, is entirely unrelated to the technology covered by the Asserted Patents.

FQ’s motion to exclude Mr. Malackowski’s testimony relating to the GP Emboss License is GRANTED.

3. Non-Infringing Alternative

FQ argues that Mr. Malackowski’s opinion “that Irving could have avoided infringement by using a denser embossing pattern on its Member’s Mark bathroom tissue and, therefore, that the maximum amount Irving would agree to pay at a hypothetical negotiation is the cost of changing that embossing pattern” should be excluded because “there are no facts from which a jury could reasonably conclude that Mr. Malackowski’s proposed [non-infringing] alternative would be acceptable.” (D.I. 195 at 35). Irving responds that it “will be able to present ample evidence from which a jury could conclude that the non-infringing alternative – bathroom tissue with a denser emboss pattern – would have been acceptable to Sam’s Club.” (D.I. 206 at 36).

I agree with Irving that whether a denser embossing pattern would have been acceptable to Sam’s Club is a factually contested point, and therefore decline to decide this factual issue in FQ’s favor before trial. Irving points to evidence that (1) unrebutted testing shows Irving’s bathroom tissue made using the same base sheet and a denser emboss pattern that it supplies to Wegmans, a different tissue seller, does not infringe (D.I. 200-1 ¶¶ 90-95), (2) unrebutted testing shows other commercially available bathroom tissue products with denser emboss patterns do not infringe (*id.* ¶¶ 96-104), and (3) Sam’s Club selected a different emboss pattern for the paper towels Irving supplies to Sam’s Club than the emboss pattern for the paper towels FQ supplies to Sam’s Club. (D.I. 200-17 at 39-40).

I find that this evidence belies FQ's claim that "there are no facts from which a jury could reasonably conclude" Sam's Club would find Mr. Malackowski's non-infringing alternative acceptable. For these reasons, FQ's motion to exclude Mr. Malackowski's testimony relating to a non-infringing alternative is DENIED.

IV. CONCLUSION

For the reasons stated above, Irving's motion for Summary Judgment of invalidity on the basis of indefiniteness and lack of written description is DENIED. Irving's motion to exclude FQ's experts' "copying" opinions is DENIED. Irving's motion to exclude Dr. Maness's damages opinion is DENIED except as to apportionment, which is GRANTED, but with leave to file a supplemental report.

FQ's motion to exclude Dr. Keller's opinions is DENIED. FQ's motion to exclude Mr. Kavalew's opinions is DENIED. FQ's motion to exclude Mr. Malackowski's damages opinion relating to the P&G-Irving Agreement is DENIED. FQ's motion to exclude Mr. Malackowski's damages opinion relating to the GP-Irving Embossing License is GRANTED. FQ's motion to exclude Mr. Malackowski's opinions on a non-infringing alternative is DENIED.

An appropriate order will issue.